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# Collider-Accelerator Department

Integrated Safety Management

# Safety Model at C-AD

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3 Root Factors (management commitment, line responsibility for injuries and worker involvement)

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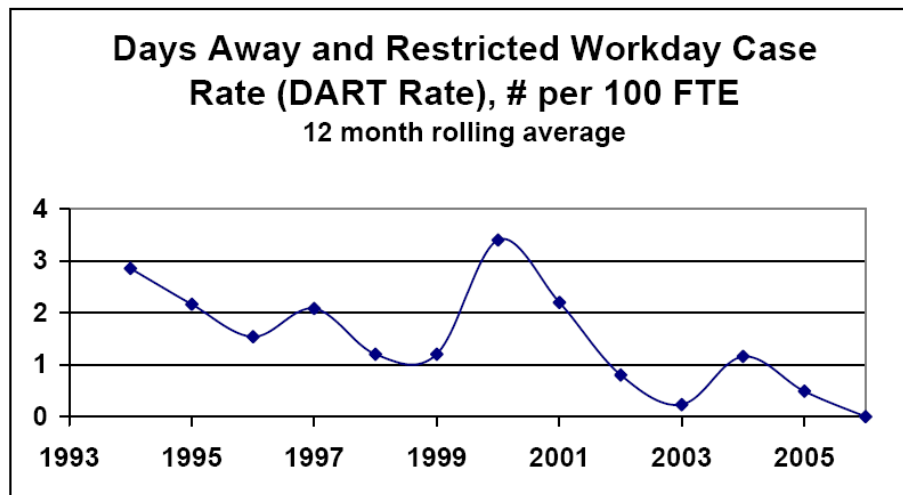
3 Drivers (clear rules, competent safety specialists and comprehensive safety systems)

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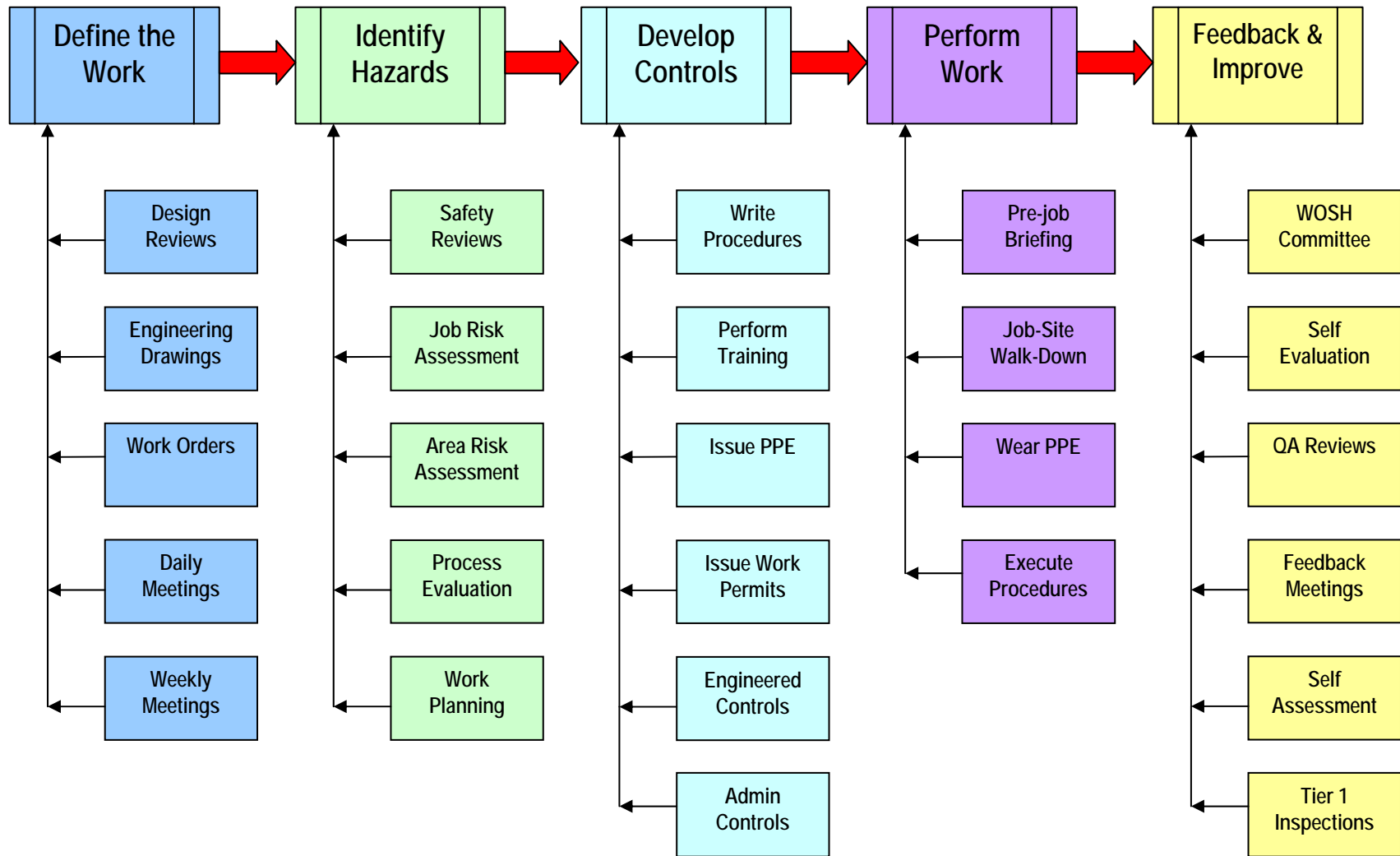
3 Outcomes (safe equipment and facilities, safe-aware people and an excellent injury record)

# Integrated Safety Management

- ISM is the bike
  - OHSAS 18001 and ISO 14001 are the wheels
  - DOE Conduct of Operations is the handlebar
  - DOE Accelerator Safety Order is the seat

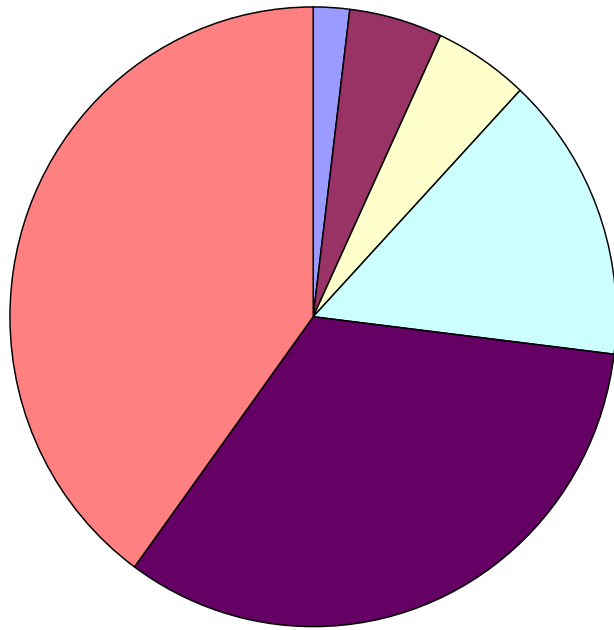


# C-AD Processes and the 5 Core Functions



# C-AD Work Planning Processes

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- ALARA/Radiation Safety Design Reviews 2%
- Experiment Safety Reviews 5%
- Accelerator Safety Reviews 5%
- Individual Job Work Permits 15%
- Written Approved Procedures 33%
- Skill of the Worker (Includes Standing Work Permits) 40%

# Management Commitment to Safety as an Overarching Priority

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- C-AD Mission Statement (OPM 1.10.2)
  - Excellence in environmental responsibility and safety ...
  - The operation of accelerators ...
  - The support of the experimental program ...
  - The design and construction of new accelerator facilities ...

# Line Accountability for Injuries

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- Held accountable but not in a punitive sense
  - Manager responsible for work environment
  - Supervisor responsible for training, awareness and PPE
  - Worker responsible for following rules
- All must step up and share some blame for an injury
  - Consequence: all must work together to prevent in future

# Clear Rules

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## Criminal acts:

- 1) While at work, physical or verbal assault, theft or stealing any material or property with the intent to keep, sell or use it for personal gain will result in immediate termination

## Significant offenses:

- 2) *Willful* failure to adhere to or follow RSLOTO, LOTO or Orange Tag Procedures in C-AD OPM Chapters 1, 2, 7 or 9
- 3) *Willful* violation of radiation safety requirements
- 4) Fighting or creating a disturbance that causes injury to others; applies to the aggressor only

## Major offenses:

- 5) Failure to adhere to or follow property protection rules in C-AD OPM 1.20
- 6) Failure to report lost or stolen keys for a secured area or equipment; duplicating a key made for a secured area or equipment
- 7) Demonstrating a carelessness or indifference to rules regarding sexual harassment, discrimination and computer security

## Minor offenses:

- 8) Failure to wear personal protective equipment while performing work requiring this equipment
- 9) Not meeting or maintaining training requirements listed in your Job Training Assessment

## Traffic violations and failure to follow safety or security postings:

- 10) Traffic violations constitute safety infractions and could be cause for disciplinary action. Safety or security postings, whether temporary or permanent, *must* be followed by all managers, supervisors and workers. These violations would be categorized as minor and a graded approach would be used to determine major or significant offenses. In the case of repeat offenders, the length of time between violations would be considered.



# Worker Involvement

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- Job Risk Assessments
- Safety Week
- Worker Occupational Safety and Health Committee
- Self Evaluations
- Safety Walks
- Daily and Weekly Meetings
- Post-Job Feedback

# Comprehensive Safety Systems

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- DOE Orders
  - DOE Order 420.2B, Accelerator Safety
  - DOE Order 420.1A, Facility Safety, §§ 4.2 and 4.4
  - DOE Order 414.1C, Quality Assurance
- BNL Requirements (SBMS)
  - Accelerator Safety
  - Work Planning and Control for Operations
  - Construction Safety
- C-AD Management Systems
  - OSH Management System, OHSAS 18001
  - Environmental Management System, ISO 14001
  - Conduct of Operations Agreement
  - Self-Assessment Program

